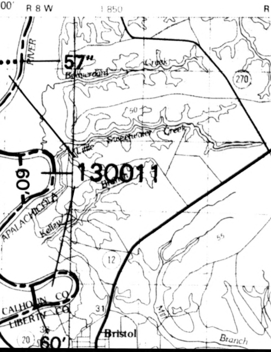
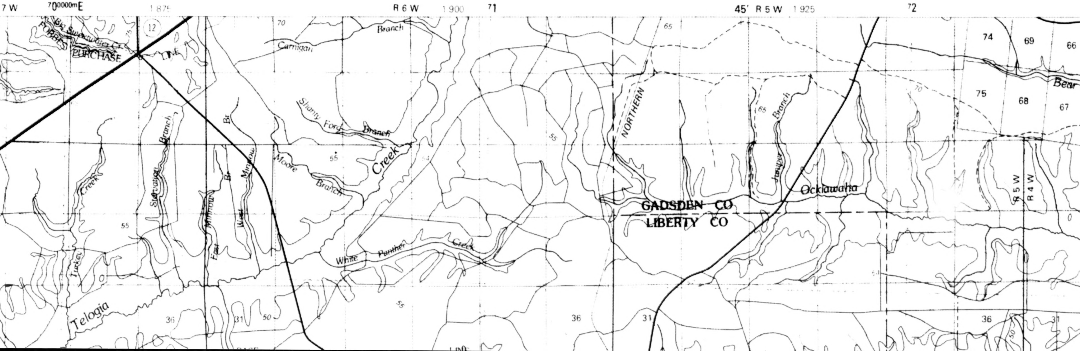
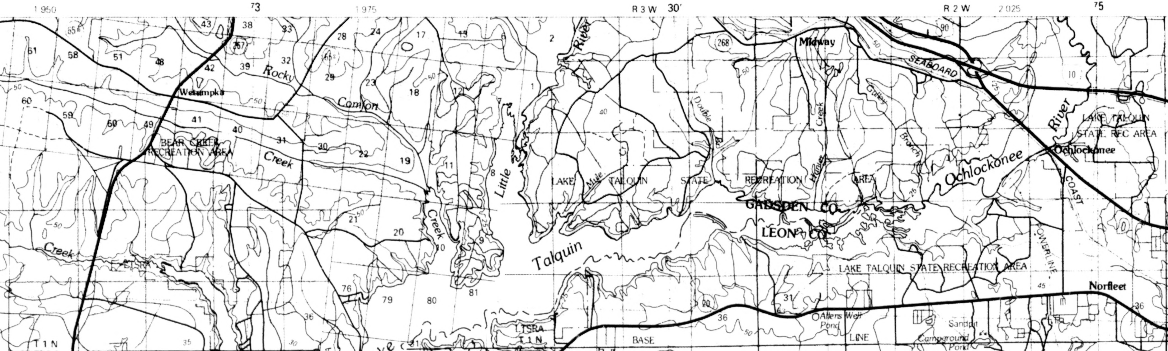
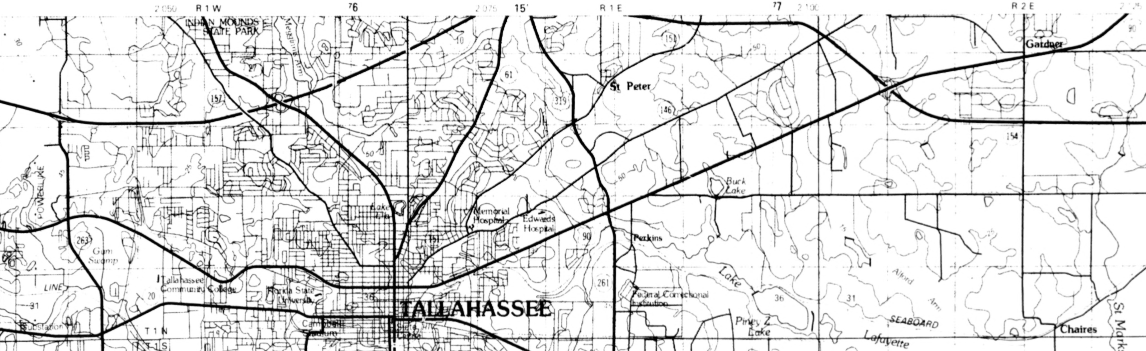
MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No. 2)
2.5
2.2
2.0
1.8
1.6
2.8
3.2
3.6
4.0
4.5
5.0
5.6
1.0
1.1
1.25
1.4


85°00'
30°30'
R 8 W
1 850
R
RIVER
57"
Bonnerdam
Creek
270
50
Little
Sweetwater
Creek
T 1 N
60'
130011
Branch
APALACHICOLA
Kelley
55
12
3370000mN
525
CALHOUN CO
LIBERTY CO
31
36
20
60'
Bristol
Mill
Branch


7 W
70000mE
1 875
R 6 W
1 900
71
45'
R 5 W
1 925
72
Big Sweetwater Cr
FORBES PURCHASE
LINE
12
70
Carrigan
Branch
65
74
69
66
Bear
Shanty Ford
Branch
Creek
Moore
Branch
55
NORTHERN
65
Branch
70
75
68
67
Starvation
Branch
Creek
Minnow
Br
East
Minnow
West
Br
Juniper
Ocklawaha
GADSDEN CO
LIBERTY CO
R 5 W
R 4 W
White
Panther
Creek
Tucker
Telogia
36
31
50
55
36
31
36
31
50
BASE
LINE


1 950
73
1 975
R 3 W
30′
R 2 W
2 025
75
Rocky
Comfort
Creek
Wetumpka
BEAR CREEK
RECREATION AREA
Creek
Little
Creek
Talquin
LAKE
Mule
TALQUIN
STATE
RECREATION
AREA
River
Double
Midway
Creek
SEABOARD
Gulley
Branch
LAKE TALQUIN
STATE REC AREA
River
Ochlockonee
Ochlockonee
COAST
GADSDEN CO.
LEON CO.
LAKE TALQUIN STATE RECREATION AREA
POWERLINE
Norfleet
Allens Well
Pond
Sandpit
Campground
Pond
BASE
LINE
LTSRA
T1N
268
267
65


2 050
R 1 W
76
2 075
15'
R 1 E
77
2 100
R 2 E
INDIAN MOUNDS STATE PARK
Meggins Arm
Gardner
St Peter
Buck Lake
Lake Ella
Memorial Hospital
Edwards Hospital
Perkins
POWERLINE
Gum Swamp
LINE
Tallahassee Community College
Florida State University
Campbell Stadium
TALLAHASSEE
Federal Correctional Institution
Lake
Piney Z Lake
Alford Arm
SEABOARD
Lafayette
Chaires
St Marks
Substation
T 1 N
T 1 S
27
157
61
319
151
146
154
90
263
261
10
20
31
36
50

AUG 14 '85 I 49.89:82/47-1/map E 9

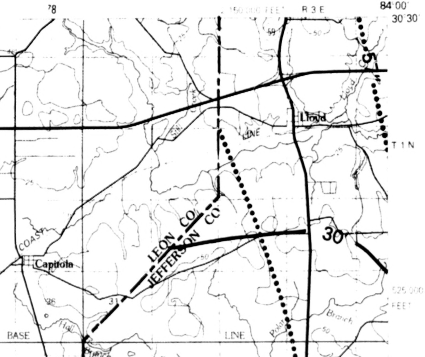
MMS 85-0011
FWS/OBS-82/47.1

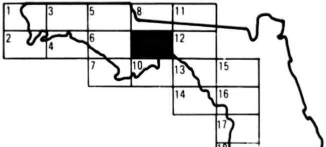
MAP E9

Tallahassee

FLORIDA ECOLOGICAL ATLAS

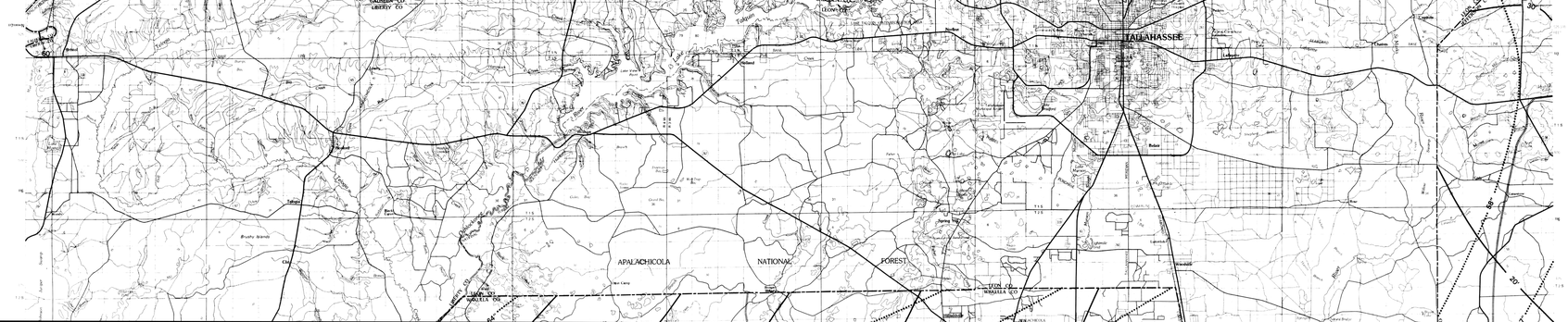
HYDROLOGY AND CLIMATOLOGY

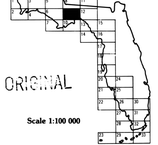

78
150 000 FEET
R 3 E
84°00'
30°30'
Lloyd
LINE
T 1 N
30
COAST
Capitola
LEON CO
JEFFERSON CO
525 000 FEET
Branch
BASE
LINE
Hall


1
2
3
4
5
6
7
8
10
11
12
13
14
15
16
17
18

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5

MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No 2)





ORIGINAL

Scale 1:100 000

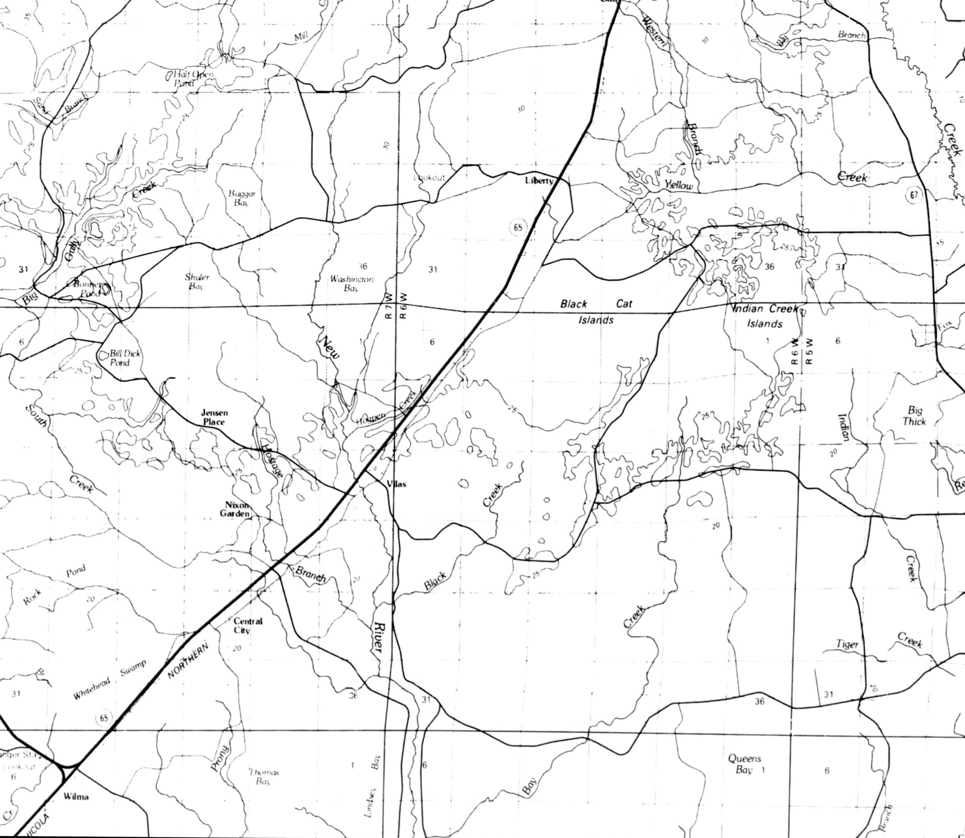
TOPICAL MAPS IN THIS ATLAS:
- A. BIOLOGICAL RESOURCES
- B. SOCIOECONOMIC FEATURES
- C. SOILS AND LANDFORMS
- D. OIL, GAS AND MINERALS
- E. HYDROLOGY AND CLIMATOLOGY

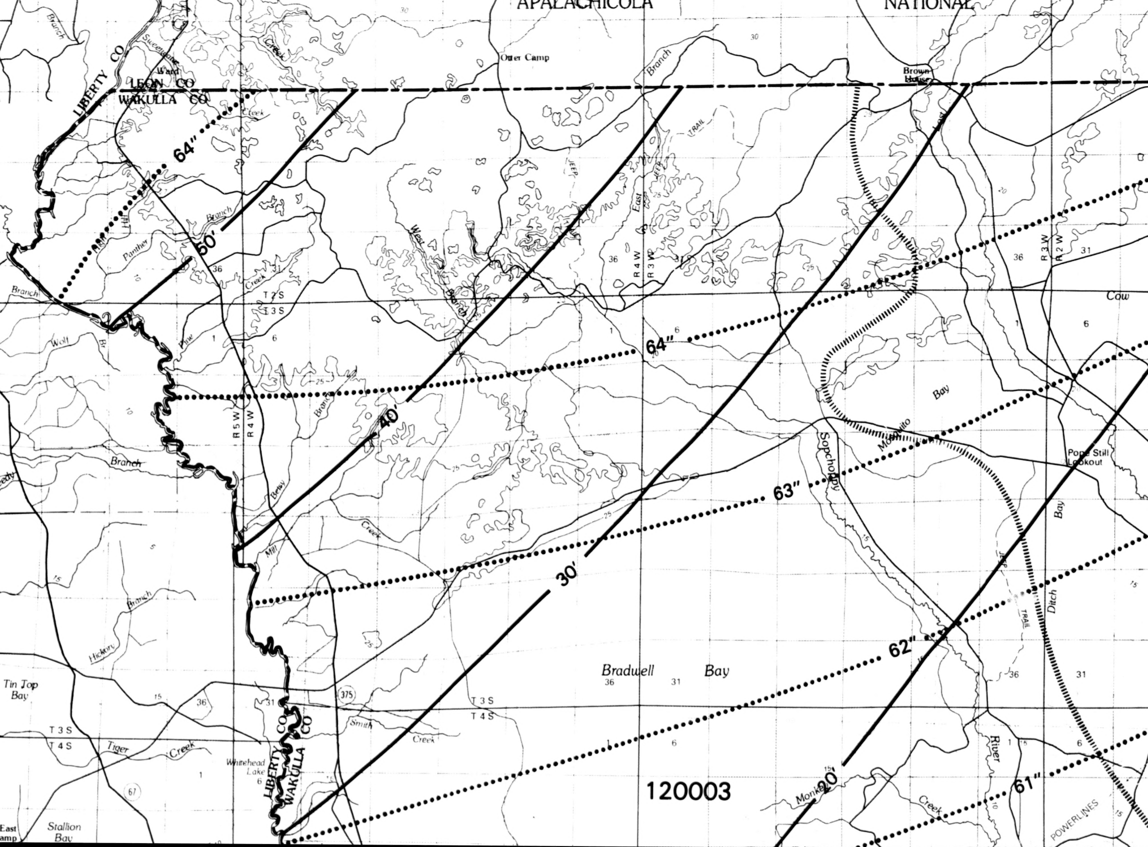
1984

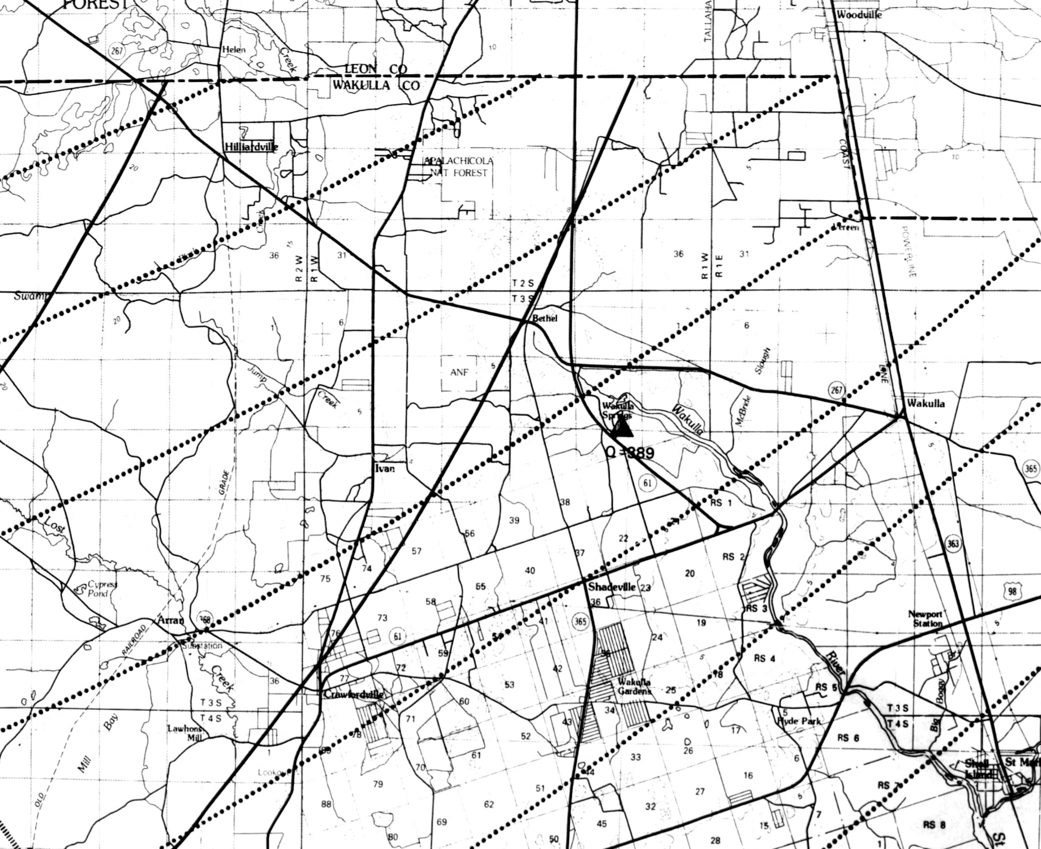
Produced by U.S. Fish and Wildlife Service and Minerals Management Service

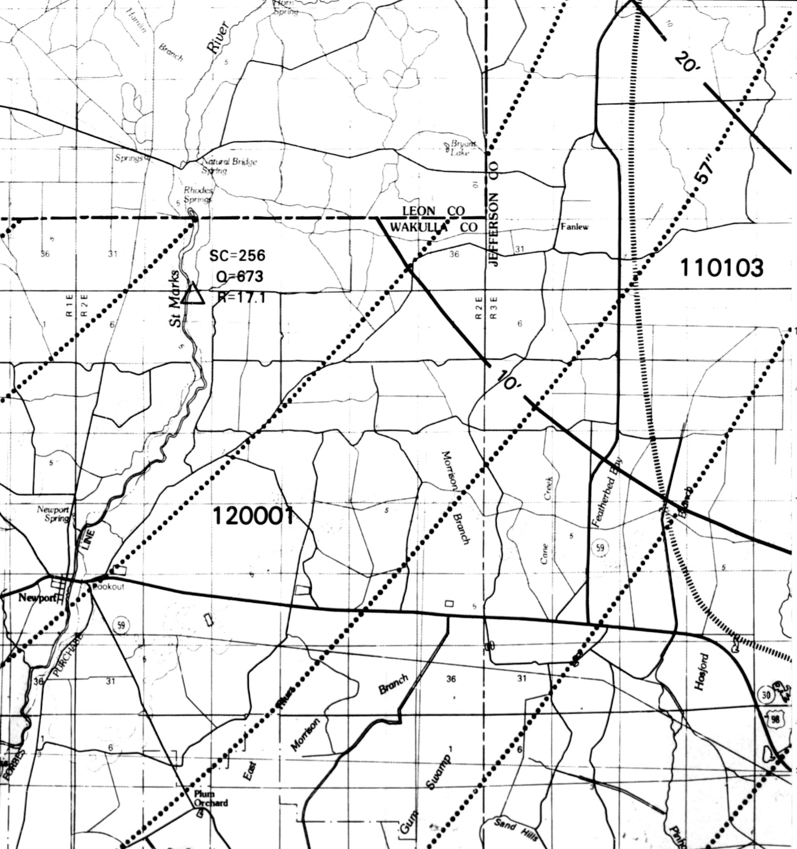
Projection and 10,000-meter grid, zone 17, Universal Transverse Mercator
20,000-foot grid ticks based on Florida coordinate system, west zone

Juniper
T 2 S
Johnson
Pond
335
36
15'
R 8 W
R 7 W
1
Franklin Pond
Crossing Br
New
T 3 S
12
334
36
1


Mill
Half Open Pond
Saint Branch
Western
Branch
Creek
Yellow
Creek
Lookout
Liberty
Buggar Bay
Creek
Gully
Bonnet Pond
Big
Shuler Bay
Washington Bay
65
67
R 7 W
R 6 W
Black Cat Islands
Indian Creek Islands
R 6 W
R 5 W
New
Bill Dick Pond
Jensen Place
Hopper Creek
Hostage
South
Creek
Nixon Garden
Vilas
Creek
Indian
Big Thick
Fox
Rock
Pond
Branch
Black
Creek
Central City
River
NORTHERN
Whitehead Swamp
Tiger
Creek
Creek
65
Ranger Sta
Lookout
Prong
Thomas Bay
Lindsey Bay
Bay
Queens Bay
Wilma
Branch
31
36
31
6
1
6
1
6
31
36
31
36
31
1
6
1
6
25
30
20


APALACHICOLA
NATIONAL
LIBERTY CO
LEON CO
WAKULLA CO
Otter Camp
Brown House
64″
50′
64″
40′
63″
30′
62″
20′
61″
Branch
Sweetwater
Ward
Creek
East Branch
TRAIL
JEEP
West Branch
Panther
Branch
Creek
T 2 S
T 3 S
R 5 W
R 4 W
R 3 W
R 2 W
Wolf
Pine
Betsy
Mill
Creek
Cow
Mosquito
Bay
Sopchoppy
Pope Still Lookout
Ditch
Bradwell Bay
Tin Top Bay
Hickory
Tiger
Creek
Smith
Creek
Whitehead Lake
Stallion Bay
East Camp
River
Monkey
Creek
POWERLINES
375
67
T 3 S
T 4 S
36
31
1
6
25
15
10
20
30
120003


FOREST
Wooduille
267
Helen
Creek
LEON CO
WAKULLA CO
TALLAHA
10
Hilliardville
APALACHICOLA
NAT FOREST
COAST
5
10
20
Creek
36
15
R 2 W
R 1 W
31
36
R 1 W
R 1 E
31
Vereen
POWERLINE
T 2 S
T 3 S
Swamp
Bethel
20
1
6
1
6
Slough
ANF
5
Jump
Creek
5
267
LINE
Wakulla
Wakulla Springs
Wakulla
McBride
Q = 389
20
Ivan
4
61
365
GRADE
Lost
38
RS 1
39
56
22
57
74
37
RS 2
363
75
Cypress Pond
40
20
55
Shadeville
23
98
58
36
RS 3
Newport Station
73
Arran
368
41
365
19
RAILROAD
76
61
54
24
Substation
59
39
18
RS 4
River
Creek
36
77
72
42
Crawfordville
53
Wakulla Gardens
25
RS 5
T 3 S
T 4 S
Lawhons Mill
78
71
60
43
34
17
Hyde Park
Bay
52
RS 6
Big
Boggy
Mill
1
89
70
61
33
26
6
Shell Island
St Mar
Lookout
OLD
79
51
16
RS 7
88
62
27
32
6
7
69
45
15
RS 8
80
50
28
1
St


Horn Spring
Hamlin Branch
River
Springs
Natural Bridge Spring
Rhodes Springs
Bryant Lake
LEON CO
WAKULLA CO
JEFFERSON CO
Fanlew
SC=256
Q=673
R=17.1
St Marks
110103
120001
R 1 E
R 2 E
R 2 E
R 3 E
T 2 S
T 3 S
20′
57″
10′
15′
475
450
425
334
Newport Spring
Newport
Lookout
LINE
PURCHASE
Morrison Branch
Cane Creek
Featherbed Bay
Branch
Hosford
East River
Morrison
Branch
Gum Swamp
Plum Orchard
Sand Hills
Forbes
59
30
98
36
31
6
5
1

—50′—

····52″····

6

N

Produced by U.S. Fish and Wildlife
Service and Minerals Management Service

Projection and 10,000 meter grid, zone 17: Universal Transverse Mercator
25,000-foot grid ticks based on Florida coordinate system, west zone

Overlay material compiled in 1983 from latest available data obtained from Federal, State and Local government agencies and other sources.

— **POTENTIOMETRIC CONTOURS OF THE FLORIDAN AQUIFER**

The map represents dry season water levels present in tightly cased wells penetrating the Floridan Aquifer during May of 1980. The contour interval is 5 and 10 feet. Contour lines have been generalized to allow for non-simultaneous water level measurement and variable well depth.
Groundwater flow is down-gradient from potentiometric highs and perpendicular to potentiometric contour lines.
(Measured in feet above mean sea level)

• **MEAN ANNUAL ISOHYETAL (RAINFALL) CONTOURS**

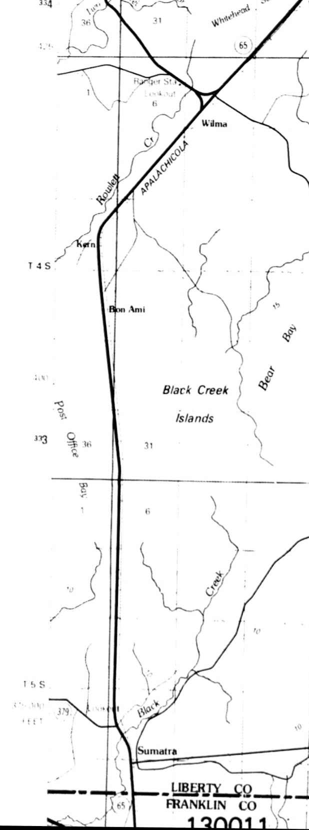
(1951-1980 National Weather Service Normal Base Period)
The contour interval is 1.0" (refer to narrative for monthly isohyetal maps and for trend evaluation).

NATIONAL WEATHER SERVICE 30-YEAR CLIMATOLOGICAL STATION

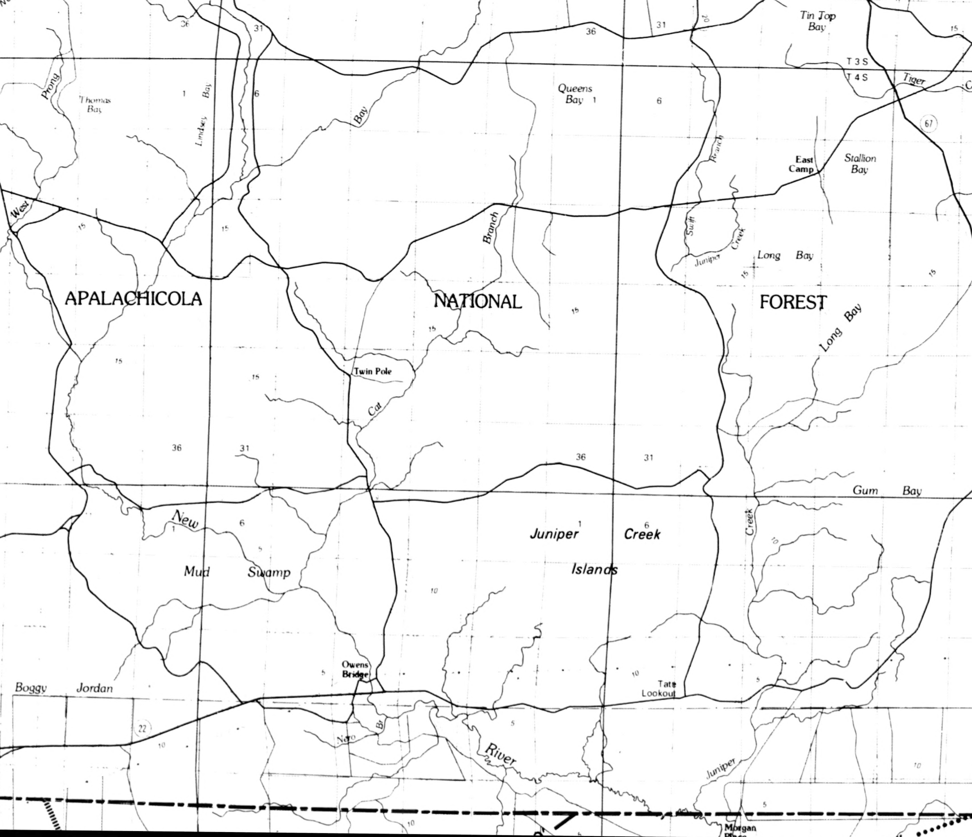
(Number in the box on map refers to station name in supplemental legend'

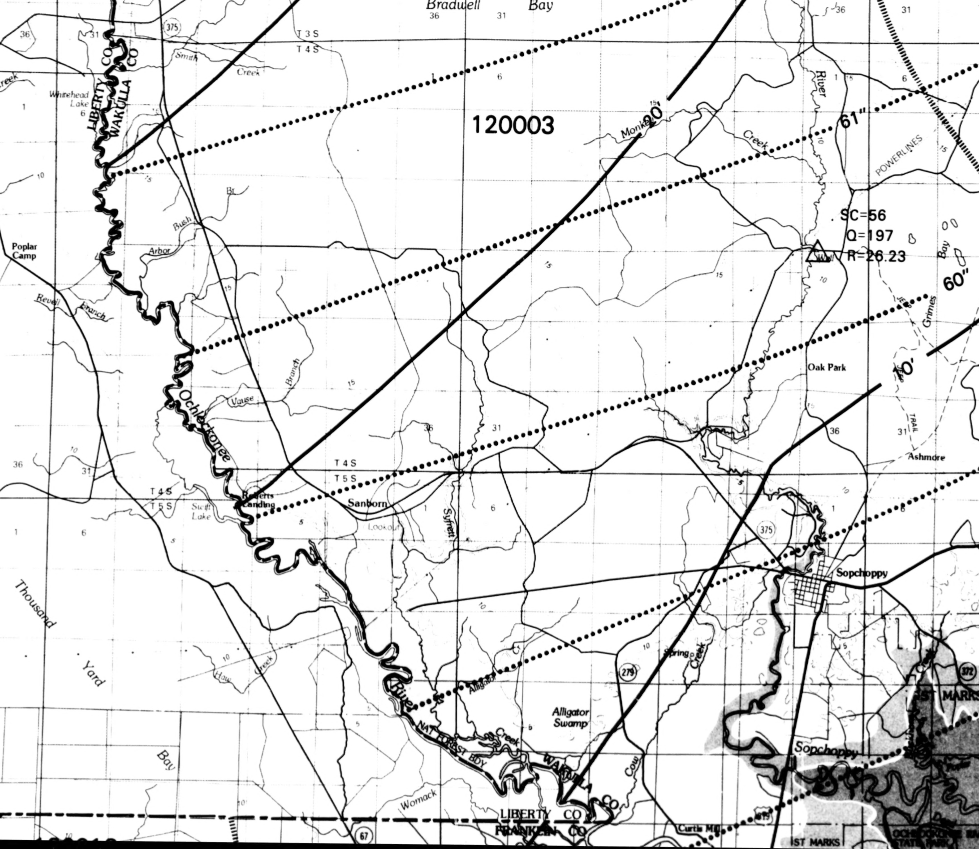
WIND ROSE STATION

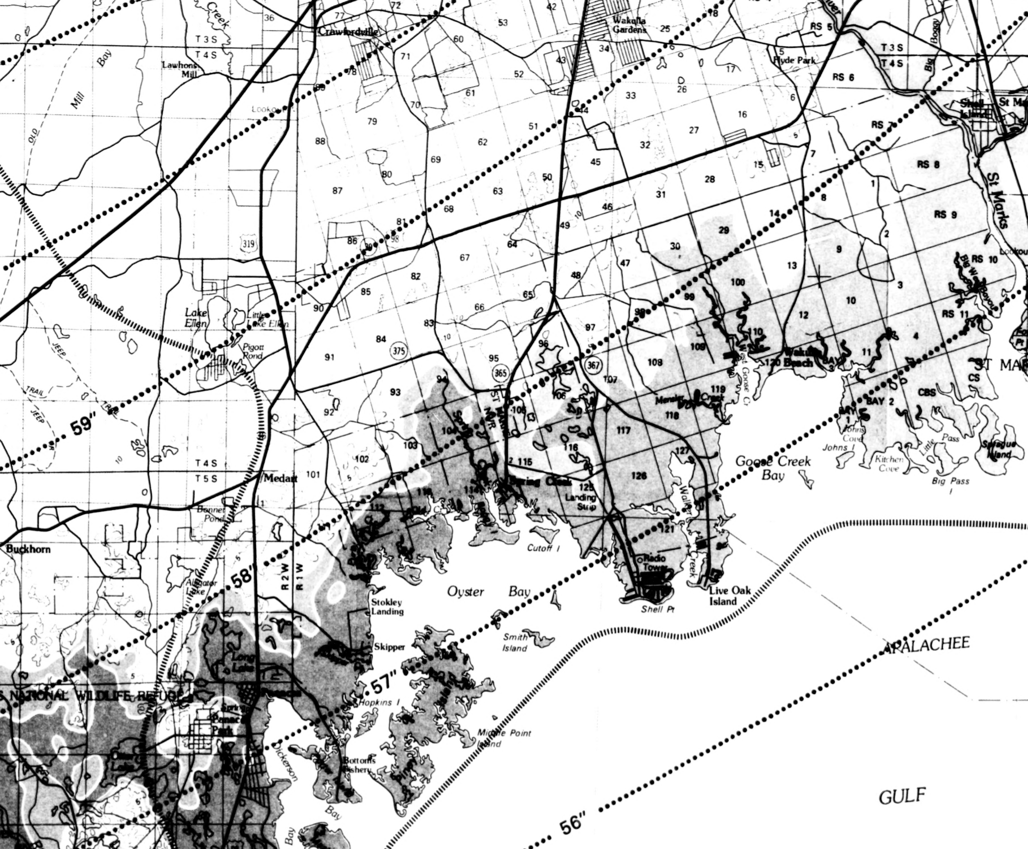
Concentric circles represent 5%

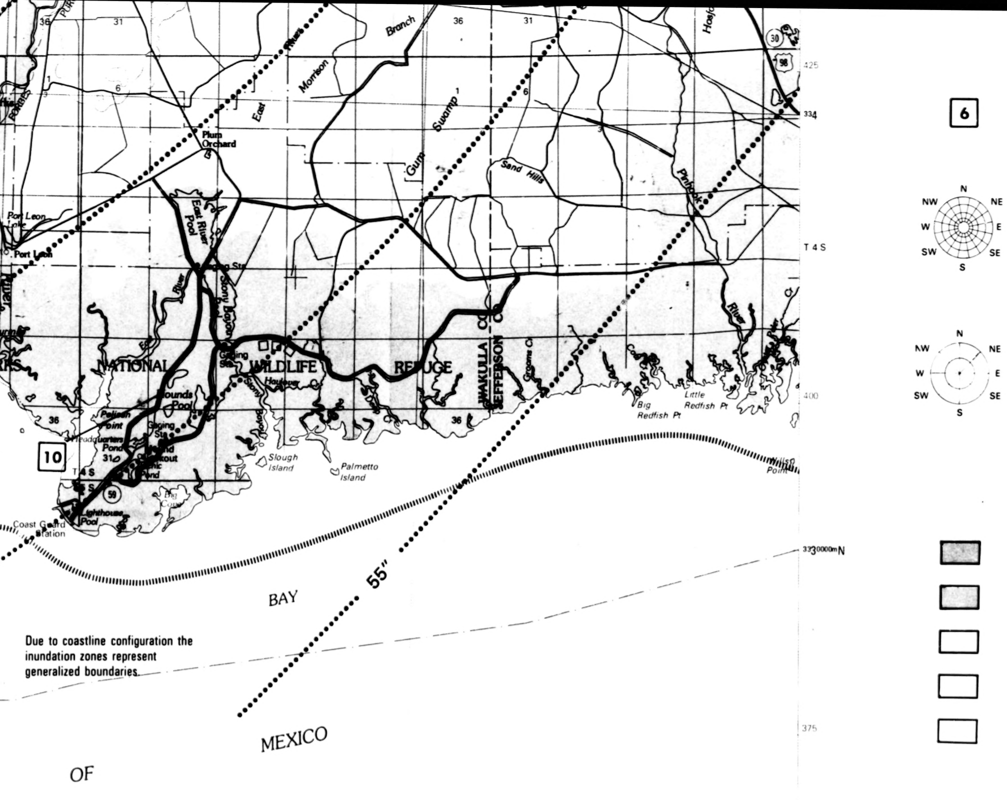


334
36
31
Whitehead
65
Ranger Sta
Lookout
1
6
Wilma
Rowlett
Cr
APALACHICOLA
Kern
T 4 S
Bon Ami
15
Bay
Bear
Black Creek
Islands
Post
Office
Bay
333
36
31
6
1
10
Creek
10
T 5 S
FEET
379
Lookout
Black
10
Sumatra
LIBERTY CO
FRANKLIN CO
65
130011


Tin Top Bay
T 3 S
T 4 S
Tiger
67
Prong
Thomas Bay
Lindsey Bay
Bay
Queens Bay
Branch
East Camp
Stallion Bay
West
Branch
Swift
Juniper Creek
Long Bay
APALACHICOLA
NATIONAL
FOREST
Long Bay
Twin Pole
Cat
Gum Bay
New
Juniper Creek Islands
Creek
Mud Swamp
Owens Bridge
Tate Lookout
Boggy
Jordan
22
Nero
Br
River
Juniper
Morgan Place
36
31
1
6
15
10
5
20


120003
Bradwell Bay
SC=56
Q=197
R=26.23
Well
61"
60"
20'
10'
T 3 S
T 4 S
T 5 S
LIBERTY CO
WAKULLA CO
FRANKLIN CO
Smith Creek
Monkey Creek
River
Creek
POWERLINES
Whitehead Lake
Poplar Camp
Bush Arbor Br
Revell Branch
Vause Branch
Ochlockonee River
Roberts Landing
Swift Lake
Sanborn
Lookout
Syfrett
Oak Park
Grimes
JEEP TRAIL
Bay
Ashmore
Sopchoppy
Sopchoppy
Thousand Yard Bay
Haw Creek
Alligator Creek
Alligator Swamp
NAT FOREST BDY
Spring Creek
Cow
Womack
Curtis Mill
ST MARKS
ST MARKS
OCHLOCKONEE STATE PARK
375
375
279
67
319
372
36
31
1
6
10
15
5


Creek
36
77
72
42
53
Wakulla Gardens
25
18
Crawfordville
T 3 S
T 4 S
Lawhons Mill
Bay
Mill
OLD
1
Lookout
319
78
71
60
52
43
34
17
5
Hyde Park
RS 5
RS 6
Boggy
Big
St Marks
Shell Island
61
70
89
79
88
62
51
44
33
26
16
6
27
32
RS 7
5
7
80
69
87
63
50
45
28
15
RS 8
1
68
81
86
30
98
49
46
31
14
8
RS 9
10
29
2
64
67
82
85
48
47
30
100
13
9
Lookout
RS 10
Big W Bayou
3
59"
JEEP
TRAIL
TRAIL
JEEP
Lake Ellen
Little Lake Ellen
Pigott Pond
90
84
83
66
65
99
98
97
10
12
RS 11
91
375
95
365
367
96
110
109
108
107
120
Wakulla Beach
BAY 3
11
4
ST MAR
CS
Pt
93
92
94
ST MARKS NWR
105
106
119
Menard Creek
118
Goose Cr
BAY 2
CBS
BAY 1
Johns Cove
Johns I
Kitchen Cove
Little Pass
Spanish Island
Big Pass
Goose Creek Bay
104
103
102
101
10
T 4 S
T 5 S
Medart
5
116
115
117
127
126
Spring Creek
125
Landing Strip
Walker Creek
113
114
112
1
Buckhorn
Bonnet Pond
Cutoff I
121
Radio Tower
Shell Pt
Live Oak Island
Alligator Lake
58"
R 2 W
R 1 W
Stokley Landing
Oyster Bay
Skipper
Smith Island
APALACHEE
Long Lake
5
NATIONAL WILDLIFE REFUGE
57"
Hopkins I
Spring Panacea Park
Middle Point Island
Dickerson
Bay
Bottoms Fishery
Bay
56"
GULF


6
10
Branch
East River
Morrison
East
Plum Orchard
Gum
Swamp
Sand Hills
Pinhook
Port Leon Lake
Port Leon
East River Pool
Stony Bayou
River
NATIONAL
WILDLIFE
REFUGE
Gaging Sta
Mounds Pool
Pelican Point
Headquarters Pond
Lookout
Picnic Pond
Lighthouse Pool
Coast Guard Station
Big Cove
Slough Island
Palmetto Island
Big Redfish Pt
Little Redfish Pt
Willis Point
WAKULLA CO
JEFFERSON CO
Grooms Cr
River
59
30
98
36
31
1
6
T 4 S
425
334
400
3330000m N
375
55″
BAY
MEXICO
OF
N
NE
E
SE
S
SW
W
NW

Due to coastline configuration the inundation zones represent generalized boundaries.

(1951-1980 National Weather Service Normal Base Period)
The contour interval is 1.0" (refer to narrative for monthly isohyetal maps and for trend evaluation).

NATIONAL WEATHER SERVICE 30-YEAR CLIMATOLOGICAL STATION

(Number in the box on map refers to station name in supplemental legend'

WIND ROSE STATION

Concentric circles represent 5% frequency interval. The average wind speed (mph) is listed in the outer quadrant of each vector direction (Wind rose data represents wind data that has been summarized by the National Climatic Center for Airports, Naval Air Stations and NWS Offices)

OFFSHORE SURFACE CURRENT ROSE

Resultant vectors for each season are shown. The magnitude of each vector is proportional to the velocity. (Concentric circles represent 3 centimeters/second currents) Vectors defined by the New England Coastal Engineers Computer Model G.A.L.

S	Spring
Su	Summer
FW	Fall/Winter

HURRICANE INUNDATION ZONES

(Maximum areas subject to flooding by Storm Category, as defined by National Weather Service Computer Models)

Category #1 Storm (74-95 mph winds; probability of occurence 1:14 years)

Category #2 Storm (96-110 mph winds; probability of occurence 1:20 years)

Category #3 Storm (111-130 mph winds; probability of occurence no historical record)

Category #4 Storm (131-155 mph winds; probability of occurence no historical record)

Category #5 Storm (> 155 mph winds; probability of occurence no historical record)

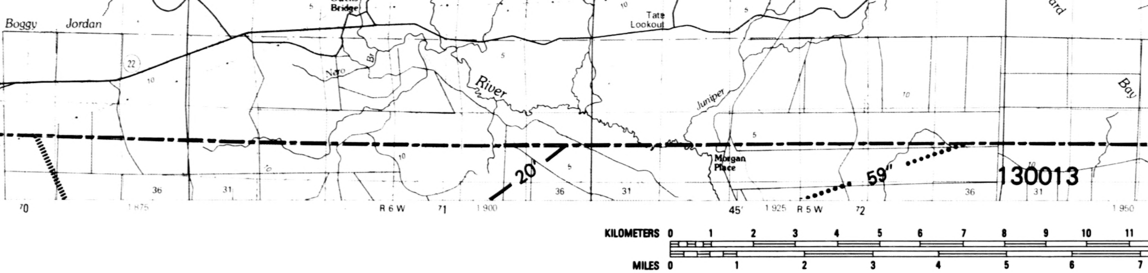
(Hurricane inundation zones on this map represent generalized areas of maximum areal storm surge flooding by storm category. The scale and detail of this map are meant for planning purposes only. This map is unsuitable for determining the vulnerability of individual buildings to storm surge)

T 5 S
375 000 FEET
379
Black
10
Sumatra
LIBERTY CO
FRANKLIN CO
130011
65
20
31
30°00'
85°00'
R 8 W
1 650 000 FEET
R 7 W

THE FLORIDA ECOLOGICAL ATLAS WAS PRODUCED BY THE
SERVICE, DIVISION OF BIOLOGICAL SERVICES, NATIONAL CO
TEAM (FWS OBS - 82 47) AND THE MINERALS MANAGEME
PLANNERS, DECISION MAKERS, AND THE GENERAL PUBLIC,
EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG L
WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECO
THE STUDY AREA INCLUDES THE COASTAL COUNTIES ESCA
OKALOOSA, WALTON, WASHINGTON, BAY, CALHOUN, GULF
JEFFERSON, TAYLOR, DIXIE, LEVY, CITRUS AND HERNANDO,
OFFSHORE APPROXIMATELY 10 MILES. THERE IS NO ATTEM
OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PR
JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL GOVERN
THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAM
AGENCIES

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOUR
INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE M
CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND
FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS F
MEASUREMENTS OF DISTANCES OR AREAS

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
ANSI and ISO TEST CHART No 2
1.0
1.1
1.25
2.8
3.2
3.6
4.0
4.5
2.5
2.2
2.0


Boggy
Jordan
22
Bridge
Nero
Br
Tate
Lookout
River
Juniper
Bay
Morgan
Place
20'
59"
130013
36
31
70
1875
R 6 W
71
1900
45'
1925
R 5 W
72
1950
KILOMETERS 0 1 2 3 4 5 6 7 8 9 10 11
MILES 0 1 2 3 4 5 6 7

U S. FISH AND WILDLIFE
OASTAL ECOSYSTEMS
NT SERVICE FOR COASTAL
TO DETERMINE AND
LAND USES. FISH AND
LOGICAL DIVERSITY
AMBIA. SANTA ROSA.
, FRANKLIN, WAKULLA,
AND EXTENDS
PT. IN THE DESIGN
ROPRIETARY
IMENT TO ESTABLISH
MS OF GOVERNMENT

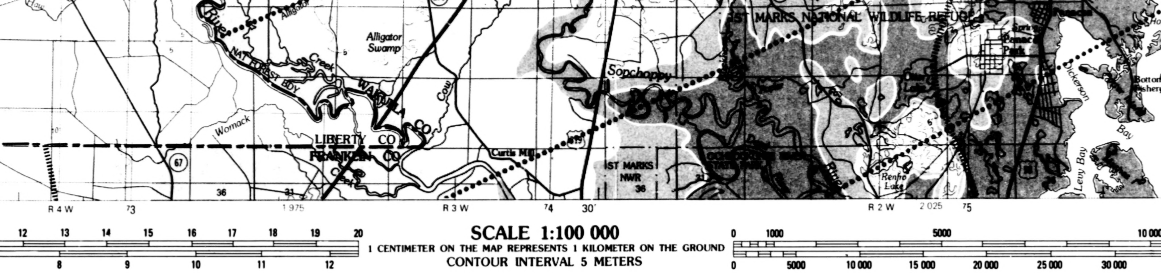
CE MATERIALS
MANY SOURCES
OTHER MAPPED
FOR PRECISE

PRIMARY SOURCES OF MAPPED INFORMATION:

HYDROLOGY: Potentiometric Surface of the Floridan Aquifer, Northwest Florida Water Management District, Tallahassee, Florida, 1980.
Potentiometric Surface of the Floridan Aquifer, Suwanee River Water Management District, Live Oak, Florida, 1980.
Potentiometric Surface of the Floridan Aquifer, Southwest Florida Water Management District, Brooksville, Florida, 1981.
Sea, Lake, and Overland Surges from Hurricanes (SLOSH) Model, National Oceanic and Atmospheric Administration, Silver Spring, Maryland, 1981.
Water Resources Data for Florida, U.S. Geological Survey, Tallahassee, Florida, 1979, 1980.
Water Quality Inventory for the State of Florida, Dept. of Environmental Regulation, Tallahassee, Florida, 1982.
Current Atlas of the West Florida Shelf, New England Coastal Engineers, Bangor, Maine. 1982.

CLIMATOLOGY: National Climatic Center, Asheville, North Carolina. 1981.

FOR COMPLETE REFERENCES SEE MAP NARRATIVE


Alligator
Alligator Swamp
Creek
NAT FOREST BDY
WAKULLA CO
Cow
Womack
LIBERTY CO
FRANKLIN CO
Curtis Mill
Sopchoppy
ST MARKS NATIONAL WILDLIFE REFUGE
ST MARKS NWR
Panacea Park
Dickerson Bay
Levy Bay
Renfro Lake
67
319
98
36
31
R 4 W
73
1 975
R 3 W
74
30′
R 2 W
2 025
75
12
13
14
15
16
17
18
19
20
8
9
10
11
12
0
1000
5000
10 000
0
5000
10 000
15 000
20 000
25 000
30 000

SCALE 1:100 000

1 CENTIMETER ON THE MAP REPRESENTS 1 KILOMETER ON THE GROUND

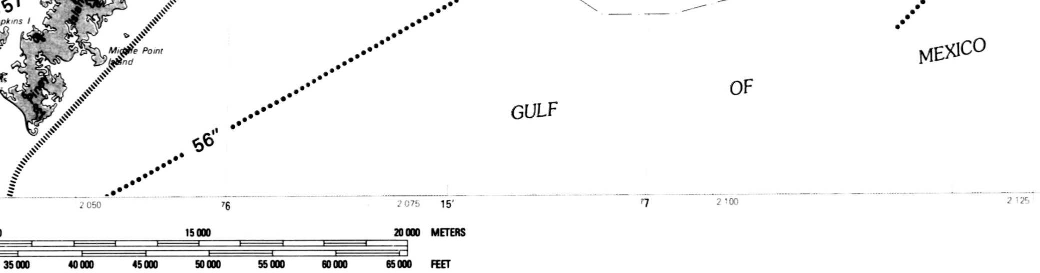
CONTOUR INTERVAL 5 METERS

CLIMATOLOGICAL STATION NAMES

1. Pensacola FAA Airport
2. Milton Experimental Station
3. Crestview FAA Airport
4. De Funiak Springs
5. Niceville
6. Chipley 3 E
7. Panama City NE
8. Blountstown
9. Apalachicola Airport
10. St. Marks 5 SSE
11. Monticello 3 W
12. Cross City 2 WNW
13. Inverness
14. Brooksville Chinsegut Hill

U.S. GEOLOGICAL SURVEY HYDROLOGIC UNIT BOUNDARIES (Cont'd)

Coastal Area between Ochlockonee and Apalachicola Rivers (130013)
Ochlockonee River Basin (120003)
St. Marks and Wakulla Rivers and Coastal Area between Aucilla and Ochlockonee Rivers (120001)
Aucilla River Basin (110103)
Coastal Area between Suwannee and Aucilla Rivers (110102)
Suwannee River Basin below Withlacoochee River excluding Santa Fe River Basin (11020
Waccasassa River and Coastal Area between Withlacoochee and Suwannee Rivers (110101)
Oklawaha River Basin (080102)
Withlacoochee River Basin (100208)
Coastal Area from Tampa Bay to Withlacoochee River (100207)


57
pkins I
Middle Point Island
56"
GULF
OF
MEXICO
2 050
76
2 075
15′
77
2 100
2 125
15 000
20 000
METERS
35 000
40 000
45 000
50 000
55 000
60 000
65 000
FEET

05)

▲ Q = ___ cfs
R = ___ in/yr

U.S. GEOLOGICAL SURVEY STREAM GAGING STATION

Mean Annual Discharge (cubic feet/second) = Q
Mean Annual Runoff (inches/year) = R

△ SC = ___ mmhos
Q = ___ cfs
R = ___ in/yr

U.S. GEOLOGICAL SURVEY STREAM GAGE AND SURFACE WATER QUALITY STATION

Mean Annual Surface Water Specific Conductivity (micromhos) = SC
Mean Annual Discharge (cubic feet/second) = Q
Mean Annual Runoff (inches/year) = R

△

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION FIXED SURFACE WATER STATION

(Insufficient period of record to establish a long term mean)

○ SC = ___ mmhos
Cl = ___ mg/l

U.S. GEOLOGICAL SURVEY GROUND WATER OBSERVATION AND WATER QUALITY WELL

Mean Annual Ground Water Specific Conductivity (micromhos) = SC
Dissolved Chloride (milligrams/liter) = Cl

S = ___ ppt

MEAN ANNUAL COASTAL SALINITY

(parts per thousand) = S

STUDY AREA BOUNDARY

▮▮▮▮▮▮▮▮▮▮ Offshore
— — — Inland (County)
— - - — Inland (State)

375
30°00′
78⁰⁰⁰⁰ᵐE
2 150
84°00′

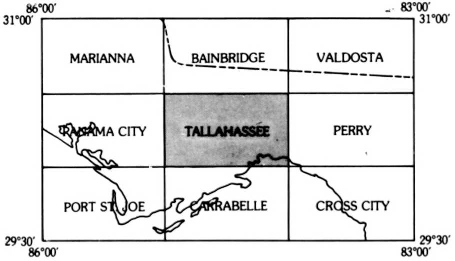
☐ probability of occurence no historical record)

☐ Category #5 Storm (> 155 mph winds; probability of occurence no historical record)

(Hurricane inundation zones on this map represent generalized areas of maximum areal storm surge flooding by storm category. The scale and detail of this map are meant for planning purposes only. This map is unsuitable for determining the vulnerability of individual buildings to storm surge)

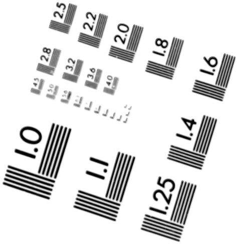
U.S. GEOLOGICAL SURVEY HYDROLOGIC UNIT BOUNDARIES

- Perdido River Basin (14106)
- Perdido Bay, Inflow and Coastal Area (140107)
- Lower Conecuh River Basin (140304)
- Escambia River Basin (140305)
- Blackwater River Basin (140104)
- Escambia Bay, Inflow and Coastal Area (140105)
- Yellow River Basin (140103)
- Choctawhatchee Bay, Inflow and Coastal Area (140102)
- Pea River Basin (140202)
- Choctawhatchee River below Pea River (140203)
- St. Andrews Bay, Inflow and Coastal Area (140101)
- Chipola River Basin (130012)
- Apalachicola River Basin (130011)
- Apalachicola Bay Coastal Area and Offshore Islands (130014)


86°00′
83°00′
31°00′
31°00′
MARIANNA
BAINBRIDGE
VALDOSTA
PANAMA CITY
TALLAHASSEE
PERRY
PORT ST. JOE
CARRABELLE
CROSS CITY
29°30′
29°30′
86°00′
83°00′

ROFILMED FROM
AVAILABLE COPY

MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No. 2)



2.5
2.2
2.0
1.8
1.6
2.8
3.2
3.6
4.0
4.5
5.0
1.0
1.1
1.4
1.25